

Commonwealth of Kentucky
Division for Air Quality
PERMIT STATEMENT OF BASIS

(DRAFT)

Title V / Synthetic Minor, Operating

Permit: V-06-024

Inoac Automotive, LLC

Springfield, KY 40069

April 23, 2007

Ralph Gosney, Reviewer

SOURCE ID: 21-229-00017

SOURCE A.I. #: 4156

ACTIVITY ID: APE20060002

SOURCE DESCRIPTION:

Inoac Automotive, LLC, formerly Springfield Products Industries, LLC (SPI), produces polyurethane and plastic products. Primary emission units include polyurethane foam fabrication, plastic skin fabrication, mold release application, touch-up painting, glue application and parts cleaning with solvent wipes. The foam lines utilize a polyol, diisocyanate, catalyst and water to produce a molded foam. The Standard Industrial Classification (SIC) Code for this source is 3089, *Plastics Products, not otherwise classified*.

The potential to emit (as defined in 401 KAR 52:001, Section 1 (56)) of volatile organic compounds (VOC) is greater than the major source threshold. The potential to emit of any single hazardous air pollutant (HAP) approaches the major source threshold of 10 tons per year, the combination of hazardous air pollutants approaches the major source threshold of 25 tons per year and the potential to emit of VOC approaches the Prevention of Significant Deterioration threshold of 250 tons per year.

To preclude the applicability of 401 KAR 51:017, *Prevention of Significant Deterioration of Air Quality (PSD)*, the source has requested voluntary federally enforceable permit limits of VOC below 250 tons per year. To preclude the applicability of 40 CFR 63, Subpart III, the source has requested voluntary federally enforceable permit limits of any individual HAP and combined HAPs below 10 and 25 tons per year, respectively. Compliance with these limits shall make this source an area source, as such is defined at 40 CFR 63.2.

This source was issued a Registration, #010R, on October 10, 1997. The source was above the threshold for obtaining a permit and should have been permitted with each piece of equipment added after that time. The Title V application was submitted by SPI on January 23, 2006. SPI became Inoac Automotive, LLC on November 8, 2006.

COMMENTS:

(1) Emission Units:

The source consists of the following significant emission units:

- 01a Polyurethane Foam Fabrication Line 1**
Description: Foam molding followed by curing in a natural-gas fired oven
Maximum Mixture Usage Rate: 333.70 lb/hr
- 01b Polyurethane Foam Fabrication Line 2**
Description: Foam molding followed by curing in a natural-gas fired oven
Maximum Mixture Usage Rate: 120.50 lb/hr
- 01c Polyurethane Foam Fabrication Line 4**
Description: Foam molding followed by curing in an electric oven
Maximum Mixture Usage Rate: 209.50 lb/hr
- 01d Polyurethane Foam Fabrication Line 5**
Description: Foam molding followed by curing in a natural-gas fired oven
Maximum Mixture Usage Rate: 55.0 lb/hr
- 02a Plastic Skin Fabrication Line 1**
Description: Plastic skin molding followed by curing in a natural-gas fired oven
Maximum Skin Mixture Usage Rate: 423.30 lb/hr
- 02b Plastic Skin Fabrication Line 2**
Description: Plastic skin molding followed by curing in a natural-gas fired oven
Maximum Skin Mixture Usage Rate: 423.30 lb/hr
- 03a Mold Release Application Line 1**
Description: Spray-on and brush-on application of mold release compounds
Maximum Spray-On Mold Release Usage Rate: 14.20 lb/hr
Maximum Brush-On Mold Release Usage Rate: 6.70 lb/hr
- 03b Mold Release Application Line 2**
Description: Spray-on application of mold release compounds
Maximum Spray-On Mold Release Usage Rate: 9.70 lb/hr
- 03c Mold Release Application Line 5**
Description: Spray-on application of mold release compounds
Maximum Spray-On Mold Release Usage Rate: 2.10 lb/hr
- 04 Touch-Up Painting with Spray Cans**
Maximum Paint Usage (approximate): 645 gal/yr
- 05a Wrapping Line Adhesive Application and Clean-Up Solvent Usage Line 1**
Maximum Adhesive Gun Spray Rate: 8.72 lb/hr
Maximum Solvent Usage: 548 gal/yr
- 05b Wrapping Line Adhesive Application and Clean-Up Solvent Usage Line 2**
Maximum Adhesive Gun Spray Rate: 8.72 lb/hr
Maximum Solvent Usage: 548 gal/yr

06 Solvent Wipe Parts Cleaning – Manufacturing Lines 1-5
Maximum Solvent Usage (approximate): 8,343 gal/yr

- (2) All of the insignificant activities are included in Section C of permit V-06-024. This includes the ovens associated with EP 01a, 01b, 01c, 02a and 02b, Polyurethane and PVC Mixing (EP 07), Natural Gas-Fired Air Makeup Units (EP 08a and 08b) and other miscellaneous sources.
- (3) Emission Factors: Emission factors from AP-42 were used to determine the natural gas combustion emissions from the ovens at EP 01a, 01b, 02a and 02b and the air make-up units at EP 08. Emissions of Methylene diphenyl diisocyanate (MDI) from the production activities were calculated based on the “MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry” from the Alliance for the Polyurethane Industry and raw material usage rates. Emissions of other pollutants from the production activities were calculated based on raw material usage rates and material balances, as provided by the permittee.
- (4) Applicable Regulations:
- (a) 401 KAR 59:010, *New Process Operations*, applies to each affected facility not subject to another emission standard for particulate matter (PM) in Chapter 59 of 401 KAR commenced on or after July 2, 1975. This regulation applies to EP 03b and 03c.
- (b) 401 KAR 50:012, *General Application*
Pursuant to 401 KAR 50:012, Section 1(2), in the absence of a specified standard, all major air contaminant sources are required to apply control procedures that are reasonable, available and practical. This plant is a major source of VOC emissions and is subject to 401 KAR 50:012, Section 1(2). Given that VOC containing materials are utilized at this facility in a disperse manner, and since such activities include fugitive emissions, the permittee has applied relevant work practice methods currently used to comply with existing Inoac ISO 14001 requirements, in order to comply with 401 KAR 50:012. These methods have been reviewed and are incorporated into the permit for purposes of 401 KAR 50:012 compliance. Therefore, in accordance with 401 KAR 50:012, Section 1(2), the permittee shall monitor and maintain records of the following work practice activities:
- (1) Review of the source-wide aspects and impacts of any new facility activity as part of the permittee’s established Program Launch Process, in relation to VOC emissions, including review of how these VOC emissions can be reduced;
 - (2) Review of the source-wide aspects and impacts of current programs by the Process Engineering Department, in relation to VOC emissions, including review of how these VOC emissions can be reduced; and
 - (3) Source-wide improvements initiated as a result of paragraphs b (1) and b (2) above.

The permittee shall report the results of this program to the Division at least once per calendar year in accordance with 6.a.(2) Specific Reporting Requirements, as listed in Section B, Group Requirements in permit V-06-024.

(5) Non-Applicable Regulations:

- (a) Inoac has requested voluntary permit emission limits of 225 tons per year (tpy) or less of VOC, 9 tpy or less of a single hazardous air pollutant (HAP), and 22.5 tpy or less of combined HAPs. As such, this source will not be a major source of HAP emissions, and there are no *NESHAPs* (40 CFR 63 and 401 KAR 63) applicable to this area source for HAP emissions, as such is defined at 40 CFR 63.2. Compliance with above emission limits shall also make the requirements of 401 KAR 51:017, *Prevention of Significant Deterioration of Air Quality*, not applicable to the source.
- (b) 40 CFR 63, Subpart III, National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production, is not applicable because this source is not a major source for HAPs.
- (c) 40 CFR 63, Subpart M, *National Emission Standards for Hazardous Air Pollutants: Flexible Polyurethane Foam Fabrication Operations*, is not applicable because this source does not operate a flame lamination line or a loop splitter and this source is not a major source for HAPs.
- (d) 40 CFR 64, *Compliance Assurance Monitoring (CAM)*, does not apply to any emission unit because all emission units have potential pre-controlled emissions less than 100 percent of the amount required for a source to be classified as a major source, pursuant to 40 CFR 64.2(a)(3).
- (e) 401 KAR 59:010, *New Process Operations*, does not apply to the application of the spray-on mold release agent at EP 03a as this material does not contain particulate matter. This rule also does not apply to the adhesive application at EP 05a and 05b as no particulate matter is generated from this process.

EMISSION AND OPERATING CAPS DESCRIPTION:

Washington County is designated as attainment for all criteria pollutants. To preclude the applicability of 401 KAR 51:017, *Prevention of Significant Deterioration of Air Quality*, total source-wide emissions of volatile organic compound (VOC) shall not exceed 225 tons per year on a twelve (12) consecutive month basis. To preclude the applicability of 40 CFR 63, Subpart III, source-wide emissions shall not exceed the following limitations on a twelve (12) consecutive month basis:

- (a) Single hazardous air pollutant (HAP) emissions: 9 tons per year; and
- (b) Combined hazardous air pollutant (HAP) emissions: 22.5 tons per year.

Compliance with the above limits shall make this source an area source, as such defined in 40 CFR 63.2 and shall also make the requirements of 40 CFR Part 63 for major sources of HAP emissions, as incorporated by reference at 401 KAR 63:002, not applicable to this source.

PERIODIC MONITORING:

In order to make the limitations specified above enforceable, the permittee shall monitor and record the material usage rates of each VOC/HAP containing material and the source-wide emission rates of VOC, individual HAP, and combined HAP. The records shall include the VOC and HAP content (weight percent) of each material for each emission unit during the month. The permit also requires the source to monitor and keep monthly records of the processing rates, operating hours and emission rates of particulate matter from EP 03b and 03c. The permittee shall also perform visual

observations of the opacity of emissions on a weekly basis from EP 03a and 03b while in operation. The permit requires these records to be reported semiannually.

The permit requires the source to annually report records of review of the source-wide aspects and impacts, in relation to VOC emissions, and the source-wide improvements initiated as a result of these reviews.

OPERATIONAL FLEXIBILITY:

There were no alternative operating scenarios proposed by the permittee.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.